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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,089	12/27/2006	Tommaso Di Giacomo	4235.438	4343
28410 7590 06/07/2010 BERENATO & WHITE, LLC 6550 ROCK SPRING DRIVE SUITE 240 BETHESDA, MD 20817				
EXAMINER MOMPER, ANNA M				
ART UNIT		PAPER NUMBER		
3657				
MAIL DATE		DELIVERY MODE		
06/07/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,089

Applicant(s)

DI GIACOMO ET AL.

Examiner

ANNA MOMPER

Art Unit

3657

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-16 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14 is/are allowed.
- 6) ☒ Claim(s) 1, 4-11, 15, 16 and 22-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Amendment to the claims received 3/08/2010 has been entered. Claims 14, 6, 8, and 12 have been amended. It is noted that Claim 8 shows the status identifier of "previously presented" however this appears to be a typo as there is an amendment present in the claim. Claim 27 has been added.

Response to Arguments

2. Applicant's arguments filed 3/08/2010 have been fully considered but they are not persuasive.

Applicant argues that Barrett fails to explicitly disclose the drive member being powered by the combustion engine to drive the rotary member drivingly connected to the pump. The examiner has given the claims the broadest reasonable interpretation, and in such it has been determined that the claim language reciting the rotary pump and the combustion engine are functional limitations and as such the combination of the prior art is capable of performing that function with the combustion engine and the rotary member of the pump. And as such language has been interpreted as being functional, the explicitly recitation of use with a combustion engine and rotary member of a pump is not required for reading on the claims. Further, it is noted the rejection under 112, 2nd paragraph as the applicant appears to be attempting to positively recite and claim the rotary member of the pump as well as the combustion engine, however as the claims are not clear as to if such elements are required by the claims, the claim is indefinite

and have been interpreted with the broadest reasonable interpretation thereby citing a functional limitation.

Applicant further argues that the art of Barrett and Temma are different devices which cannot be combined as the principles of operation are different. The examiner disagrees. Both references disclose an assembly which causes a bias and actuation of a wheel or pulley, while Barrett discloses this bias as a means for connecting two wheels and transferring motion between the two wheels while Temma discloses a tensioner wherein during the bias and actuation a belt is moved to take up slack. While both references are being utilized for different purposes, the examiner feels that both references disclose similar fundamental concepts for the biasing and actuation of a wheel or pulley in a direction and therefore constitute combinable references that one of ordinary skill in the art would find obvious.

3. Applicant argues that Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicants arguments with respect to the lack of a torsional elastic means exerting a rotational force and being housed within the movable supporting member, as well as the mechanical drive not being a two stage reversible reduction gear drive are moot in view of the new grounds of rejection and presented below.

4. Applicant's arguments, see pg 18, filed 3/08/2010, with respect to claim 9 have been fully considered and are persuasive. The rejection of claims 9-11 and 15-16 has been withdrawn, however it is noted that the rejection under 112, 2nd paragraph of claim 1 thereby also rejects claims 9-11 and 15-16

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 4-11, 15-16, 22-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites "torsional elastic means... so that said drive wheel drivingly contacting said rotary member and a drive member powered by said combustion engaging to drive the rotary member drivingly connected to said pump." The amendment to the claims adding "drivingly connecting to said pump" appears to be attempting to positively recite and require the pump, however it also appears by the recitation of "so that said drive wheel" that the language is intended to be functional language and intended use. Therefore it is unclear as to the scope of the claim as to whether the pump and the combustion engine are positively recited and required by the claim or stand as a functional limitation.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1, 4-8 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett (US 2,823,546) in view of Wakabayashi (US 3,534,923) and further in view of MacNaughton et al. (US 2003/0083164 A1) and Norton (Machine Design, Pg. 720-722).

As per claim 1, Barrett discloses drive assembly (Fig. 2-5) for driving a rotary member (14), of a pump (in this case it is a starter, but is capable for use with a pump) of a combustion engine (Col. 1, Ln. 23-25); the assembly comprising:

a movable supporting member (11);

a drive wheel (13) fitted idly to said movable supporting member (11, Fig. 1).

Barrett further discloses the supporting member (11) being rotatable about a pivot (10) such that the drive wheel (13) is capable of transferring rotational motion between the rotary member (14) and driving member (20) powered by a combustion engine (Col. 1, Ln. 26-37).

Barrett fails to explicitly disclose a torsional elastic means for moving exerting a force on said movable supporting member, an actuating means provided to exert a force in opposition to that exerted by said elastic means to detach said drive wheel from at least one of said rotary member and said drive member, and wherein said actuating means comprising a reversible electric motor such that a force exerted by said elastic means to push said drive wheel against said rotary member and said drive member being greater than the travel resistance of said actuating means when maintained in a disabled rest condition.

Wakabayashi discloses a drive assembly comprising a drive wheel (9) mounted on a supporting member (8) such that a spring (17) biases the arm for rotation about the pivot (8) to bias the drive wheel into engagement with rotary member (6) and wherein said arm being further actuatable about said pivot (8) by an actuator (Fig. 1) for actuating the arm (8) in a direction opposite that of the spring force such that the actuator applies a force to disengage the drive wheel (9) out of engagement with said rotary member (6) wherein the force exerted by the elastic means being greater than the travel resistance of said actuating means when maintained in a disabled rest condition.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the drive assembly of Barrett to include elastic means actuating the support arm for engagement with the rotary member and an actuating means exerting a force in opposition to the elastic means to detach said drive wheel from at least one of said rotary member and said drive member, said such that a force exerted by said

elastic means to push said drive wheel against said rotary member and said drive member being greater than the travel resistance of said actuating means when maintained in a disabled rest condition.

Modified Barrett fails to explicitly disclose the elastic means being a torsional elastic means and being housed within the movable supporting member.

MacNaughton et al. discloses a tensioner (10, Fig. 1) wherein an idler pulley (70) is supported for rotation on a supporting member (54) and wherein said supporting member is pivotable about a pivot axis (22), said pivoting occurring as a result of a torsional spring force by coil spring (28) attached to said supporting member (54) and a base plate (36) and wherein said coil spring (28) is housed within the supporting member (54, Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the drive assembly of Modified Barrett to include a torsional elastic means and being housed within the movable supporting member, as taught by MacNaughton et al. for the purpose of providing a more compact design and providing the spring with protection from debris.

Modified Barrett fails to explicitly disclose the actuating means comprising a reversible electric rotary motor comprising a mechanical drive.

Temma et al. discloses a tensioner (50, Fig. 4, Fig. 5) having an idler wheel (51) supported on a movable supporting member (53), the idler wheel engages a driving member (15,) and an elastic means in the form of a spring (54) for biasing the tensioner in a direction for engaging and positively tensioning the driving member (15) via the idler

wheel, and wherein said tensioner further comprises an actuator in the form of a motor (55) having a gear train (56, 53b) for exerting a secondary force on the tensioner in a direction opposite that of the spring to relieve tension on the driving member.

It would have been obvious to one of ordinary skill in the art to modify the drive assembly of Barrett to include the actuator being a reversible electric rotary motor comprising a mechanical drive, as taught by Temma et al., for the purpose of providing a controllable means for selectively engaging and disengaging the rotary member and providing such controllable means in a small space.

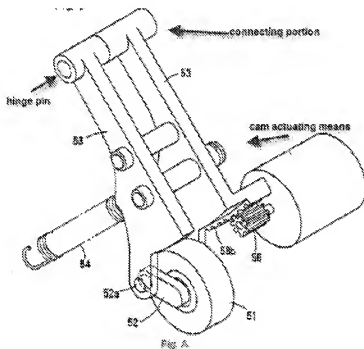
Modified Barrett fails to explicitly disclose the actuating means comprising a two stage reversible reduction gear.

Norton discloses the use of a compound gear train with two or more gears for adjusting the train ratio between an input and an output.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the drive assembly of Modified Barrett to include a two stage reversible reduction gear, as taught by Norton, for the purpose of adjusting the train ratio between the input motor and the output, further it is well known to provide a gear train between an input and an output to optimize the torque transmitted as well as for allowing a smaller motor.

As per claim 4, Temma et al. further discloses the mechanical drive (53b, 56) is interposed between the electric rotary motor (55) and said movable supporting member (53).

As per claim 5, Temma et al. further discloses the movable supporting member (53) comprises a connecting portion (Fig. A) disposed opposite to an end portion (having pin 52a) that supporting said drive wheel (51), and connected to said mechanical drive (via end having teeth 53b) to move said supporting member along a circular trajectory.



As per claim 6, Temma et al. further discloses a gear drive (56, 53b) interposed between the electric rotary motor (55) and said movable supporting member (53).

As per claim 7, Temma et al. further discloses the mechanical drive comprises cam actuating means (Fig. A).

As per claim 8, Temma et al. further discloses cam actuating means (Fig. A) are interposed between said gear drive (56, 53b) and said connecting portion (Fig. A).

As per claim 22, Temma et al. further discloses the movable supporting member (53) comprises two contoured portions.

As per claim 23, Temma further discloses the contoured portions extend on opposite sides of a central plane of symmetry of the drive wheel (51), which plane is perpendicular to the axis of rotation of said drive wheel (See Fig. 4).

As per claim 24, Modified Barrett doesn't explicitly disclose said contoured portions being made of molded plastic material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the contoured portions to be made of molded plastic material to provide proper strength and weight characteristics. Also note MPEP Section 2144.07 states that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination.

As per claim 25, Temma et al. further discloses contoured portions contact, and are connected integrally to, each other (See Fig. 4).

As per claim 26, Temma et al. further discloses contoured portions define at least one end fork having respective arms; each arm having a respective integral cylindrical projection forming part of a hinge pin (52b) coaxial with a relative axis (see Fig. 4), and to which the drive wheel (51) is mounted to rotate about the relative axis (paragraph 0063, lines 19-21).

As per claim 27, Norton further discloses the two stage reversible reduction gear drive comprises a pinion (N4), a gear (N3) non-rotatably coupled to and coaxial with

said pinion, and an output wheel (N5) meshing with said pinion (N4); and wherein said gear (N3) is in mesh with a sprocket wheel (N3) of the input shaft.

Allowable Subject Matter

10. Claims 12-14 allowed.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ANNA MOMPER** whose telephone number is (571)270-5788. The examiner can normally be reached on **M-F 6:00-3:30 (First Friday Off)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

am

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